

WHAT IS CLAIMED

1. An arrangement for testing a telephone line comprising:

a hand-held measurement unit containing  
5 communication and test interface circuitry that is configured to be coupled to a telephone wireline and is arranged to engage a personal digital assistant type device, said hand-held measurement unit being controllably operative to participate in testing of  
10 characteristics of said telephone wireline; and  
a test unit installed in a telephone service facility and containing communication and test interface circuitry that is configured to be coupled to said telephone wireline, and is controllably operative  
15 to participate with said hand-held measurement unit in testing characteristics of said telephone wireline.

2. The arrangement according to claim 1, wherein said hand-held measurement unit and said test unit are controllably operative to exchange test control  
5 messages with one another that are effective to cause a selected electrical condition to be applied to a first portion of said wireline by one of said hand-held measurement unit and said test unit, and to cause a prescribed electrical measurement to be made at a  
10 second portion of said wireline by another of said hand-held measurement unit and said test unit, in response to said selected electrical condition.

3. The arrangement according to claim 2, wherein said hand-held measurement unit is operative to exchange test control messages with said test unit by means of a test trunk.

4. The arrangement according to claim 1, wherein said hand-held measurement unit is further operative to couple test interface circuitry thereof to said  
5 telephone wireline, and to measure preselected parameters of said telephone wireline independent of participation of said test unit in measuring said preselected parameters of said telephone wireline.

5. The arrangement according to claim 4, wherein said preselected parameters include at least one of AC voltage, DC voltage and loop current.

6. The arrangement according to claim 1, wherein characteristics of said telephone wireline, testing of which is performed by participation of both said hand-  
5 held measurement unit and said test unit, include at least one of tone loss, power influence, circuit noise, balance, capacitance, resistance, stress and load coil detection.

7. The arrangement according to claim 1, wherein said hand-held measurement unit and said test unit are operative to exchange frequency shift keying (FSK)-  
5 based messages which are effective to control testing

of said wireline.

8. The arrangement according to claim 7, wherein said hand-held measurement unit is operative to initiate an FSK log-in transmission containing caller ID information, in response to which said test unit transmits the received caller ID information via an FSK communication channel to said hand-held measurement unit as an acknowledgement of an access request, said the hand-held measurement unit capturing and displaying said caller ID information transmitted over said FSK communication channel from said test unit.

9. A portable test device for testing a telephone line comprising:

a hand-held measurement unit containing communication and test interface circuitry that is configured to be coupled to a telephone wireline and is arranged to engage a personal digital assistant type device, said hand-held measurement unit being controllably operative to test characteristics of said telephone wireline;

a personal digital assistant type device through which control inputs and outputs are interfaced with a user of said portable test device; and wherein

said hand-held measurement unit is operative, for a first mode of operation, to couple test interface circuitry thereof to said telephone wireline, and independently measure preselected parameters of said

telephone wireline, and for a second mode of operation,  
to exchange test control messages with a test unit in a  
20 telephone service facility, and to participate with  
test interface circuitry of said test unit in testing  
characteristics of said telephone wireline.

10. The portable test device according to claim  
9, wherein said preselected parameters include at least  
one of AC voltage, DC voltage and loop current.

11. The portable test device according to claim  
9, wherein said hand-held measurement unit and said  
test unit are controllably operative to exchange test  
5 control messages with one another that are effective to  
cause a selected electrical condition to be applied to  
a first portion of said wireline by one of said hand-  
held measurement unit and said test unit, and to cause  
a prescribed electrical measurement to be made at a  
10 second portion of said wireline by another of said  
hand-held measurement unit and said test unit, in  
response to said selected electrical condition.

12. The portable test device according to claim  
11, wherein said hand-held measurement unit is  
operative to exchange test control messages with said  
5 test unit by means of a test trunk.

13. The portable test device according to claim  
11, wherein characteristics of said telephone wireline,

testing of which is performed by participation of both  
5 said hand-held measurement unit and said test unit,  
include at least one of tone loss, power influence,  
circuit noise, balance, capacitance, resistance, stress  
and load coil detection.

14. The portable test device according to claim  
9, wherein said hand-held measurement unit and said  
test unit are operative to exchange frequency shift  
5 keying (FSK)-based messages which are effective to  
control testing of said wireline.

15. A method of testing a telephone line  
comprising the steps of:

(a) providing a hand-held measurement unit  
5 containing communication and test interface circuitry  
that is configured to be coupled to a telephone  
wireline and is arranged to engage a personal digital  
assistant type device, said hand-held measurement unit  
being controllably operative to participate in testing  
10 of characteristics of said telephone wireline;

(b) providing a test unit in a telephone service  
facility and containing communication and test  
interface circuitry that is configured to be coupled to  
said telephone wireline, and is controllably operative  
15 to participate with said hand-held measurement unit in  
testing characteristics of said telephone wireline;

(c) coupling said hand-held measurement unit to  
said telephone wireline and exchanging test control

communication messages between said hand-held  
20 measurement unit and said test unit, so as to establish  
test connectivity paths between said wireline and each  
of said hand-held measurement unit and said test unit;  
and

(d) testing characteristics of said telephone  
25 wireline by means of at least said hand-held  
measurement unit.

16. The method according to claim 15, wherein  
step (c) comprises causing said hand-held measurement  
unit and said test unit to exchange test control  
5 messages with one another that are effective to cause a  
selected electrical condition to be applied to a first  
portion of said wireline by one of said hand-held  
measurement unit and said test unit, and to cause a  
prescribed electrical measurement to be made at a  
10 second portion of said wireline by another of said  
hand-held measurement unit and said test unit, in  
response to said selected electrical condition.

17. The method according to claim 16, wherein  
said hand-held measurement unit is operative to  
exchange test control messages with said test unit by  
5 means of a test trunk.

18. The method according to claim 15, wherein  
step (d) comprises coupling test interface circuitry of  
said hand-held measurement unit to said telephone

- 5 wireline, and measuring preselected parameters of said telephone wireline independent of participation of said test unit in measuring said preselected parameters of said telephone wireline.

19. The method according to claim 18, wherein said preselected parameters include at least one of AC voltage, DC voltage and loop current.

20. The method according to claim 15, wherein characteristics of said telephone wireline, testing of which is performed by participation of both said hand-  
5 held measurement unit and said test unit, include at least one of tone loss, power influence, circuit noise, balance, capacitance, resistance, stress and load coil detection.

21. The method according to claim 15, wherein said hand-held measurement unit and said test unit are operative to exchange frequency shift keying (FSK)-  
5 based messages which are effective to control testing of said wireline.